

## ABSTRACT

An interferometer includes a two-frequency laser and a polarizing beam splitter (PBS) that separates a heterodyne beam from the laser into separate beams having different the frequencies and orthogonal polarizations. Optical fibers conduct the separate beams to a beam combiner for interferometer optics. The PBS and/or the beam combiner can use a coating to reflect one linear polarization and transmit an orthogonal linear polarization. To improve extinction ratios in the PBS or the beam combiner, a yaw angle for an input beam is non-zero and corresponds to a peak in the extinction ratio of a reflected beam.